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From the Professional Stream

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CURRENTS and SOUNDINGS

MAKING THE UNDISCUSSABLE AND ITS UNDISCUSSABILITY DISCUSSABLE

Chris Argyris, *Harvard University*

At the very time that the sophistication of managerial technology and information systems increase, polls inform us that (1) the public's confidence in the ability of public and private organizations to perform effectively is decreasing and (2) the confidence of the public in professionals who provide services and manage institutions is also steadily decreasing (National Opinion Research Corporation, 1978). There are no doubt several factors contributing to these trends.

I should like to focus on one set of these factors that is crucial. I refer to the inability of organizations to discuss risky and threatening issues, especially if these issues question underlying organizational assumptions and policies. The curious feature of this factor is that in most cases the information required to discuss the issues intelligently is available (albeit scattered) in the organization. The problem is that discussing or writing up risky issues is unacceptable. For example, I watched memoranda written by young foreign service officers get "their edges rounded off" before they were submitted by the superiors to their respective superiors. It is not surprising to hear a senior official ask with frustration, "Do you think I can get a memo on China that I could not read in Time magazine?" Perhaps this is why George Ball is quoted as having described the State Department as a fudge factory.

The description that I just gave implies that the problem is organizational. This, in turn, implies that organizations should be managed in such a way that there is less conformity and group think. These implications are valid.

My recent research suggests, however, that the organizations may not be the basic cause of the problem. It appears that most individuals in our society (and in many societies throughout the world) are taught,

through acculturation and socialization, a set of values, action strategies, and skills that lead them to respond automatically to threatening issues by "easing in," "appropriately covering," or by "being civilized."

Any way you wish to describe the actions, they add up to making threatening issues undiscussable and then to making their undiscussability undiscussable. The organization may not be the culprit; it may be the victim of the individuals who work within it. However, once the victim, the organization may collude to maintain and reinforce the problem.

. . . at the heart of Watergate were layers of issues that were undiscussable, and their undiscussability was undiscussable.

Consider the case of 80 administrators attending an executive program. They were asked to deal with a case about David College. The president of the college, in an attempt to solve some important financial problems, had appointed a faculty committee to take a hard look at the future. The faculty committee deliberated for several months and produced a report. The 80 administrators read the faculty committee's recommendations in the report and found them to be vague, covering up the real issues, and not facing up to reality. The majority expressed such a degree of hostility toward the faculty (in the case) that it was not unfair to infer that the case touched an important nerve of these educational administrators. Indeed, they all agreed that they had faced similar problems in their universities. The faculty were playing a well-known game. The faculty covered up the real issues because they were threatening, but they wrote a report reading as if there were no threatening issues.

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I am indebted to my colleague Professor Larry Lynn for many helpful suggestions.

The administrators were then asked to break up into small groups and make specific recommendations to the president of Davis College. Eight such groups independently recommended that the president accept the faculty report with laudatory comments about the loyalty and good sense of the faculty, and that he later create a new committee that would get things done. During the small group discussions, some wanted the president to reject the report tactfully and tell the committee to start over again. They were defeated in all cases because the administrators had little confidence that the faculty would do any better the second time around.

So we have administrators who get angry at faculty that play games of hiding the truth, who advise the president to write a letter that also hides the truth (i.e., the faculty were playing games). Moreover, they advised the president to play another well-known game. They recommended that the president appoint another committee but act as if it were taking on a new assignment.

When the administrators were confronted with these inconsistencies, they responded by asking if there was another alternative. Perhaps, the case discussion leader commented, the faculty committee (in the case) had asked itself the same question.

The games just described required two peculiar and important features if they were to succeed. First, the games had to be undiscussable. Assuming the president sent the recommended letter, then he would know that he was playing a game. It is likely that he would also believe that the faculty knew that he was playing a game, especially when the second committee was appointed with fewer faculty and more administrators. The faculty, on the other hand, probably also knew that the president knew that they were playing games by writing the report that they wrote. The second feature was that people had to act as if there were no games being played. Hence, not only were the games undiscussable but their undiscussability was undiscussable!

Whenever I have asked people about these games, they immediately recognize them as real. Many report three types of actions that administrators can take to protect themselves from these organizational games. First, jobs may be redefined to make sure that responsibilities are clear. Second, structures may be redefined to clarify and tighten up reporting relationships. Third, tighter management information systems or tougher analytical decision-making processes may be implanted in order to tighten things up and make people more responsible and responsive.

The readers are aware, I believe, of the frequency with which these actions have increased during the last ten years. Yet, the decrease in the public's trust in organizations to perform effectively, described at the outset, has also occurred at the same time. The readers of this journal may ask if events such as Watergate, Vietnam, and various bureaucratic scandals are not the major causes of the decrease in the public's confidence. There is no doubt that such events create doubt in the minds of our citizens. But the trends that I have

reported above began before these events and, in many cases, continue in organizations at the city and state levels, as well as in the private sector, that were not directly involved. Moreover, at the heart of Watergate were layers of issues that were undiscussable, and their undiscussability was undiscussable.

One explanation of this puzzle is related to the fundamental administrative assumption embedded in these strategies, the assumption that managerial efficiency can be enhanced with tighter controls. But this assumption also contains an assumption; namely, that tighter controls produce valid information. Human beings assume, however, that truth is a good idea when it is not threatening. When information is threatening, the normal tendency is to hide the fact that this is the case and to act as if you are not hiding the facts.

... organizations need administrators, especially at the upper levels, who know how to cope with dilemmas; who know how to create and facilitate double-loop learning.

The point is not that we should get rid of, or play down, information systems and analytical procedures. The point is (a) to make them more effective by reducing the causes for people to distort information and (b) to reduce the unintended organizational rigidity that they may create when they are introduced alongside the games. For example, in a large newspaper company, the executives agreed that undiscussable games existed. However, they also felt that sound budgetary and financial management would reduce the need for games. Two years later, the same executives admitted that the games had been reduced in relation to the easy issues. The games remained and were driven deeper underground for the more important nontrivial issues (Argyris, 1974).

In other words, if the causes for distorting information are bypassed by the use of organizational policies and practices, the effectiveness of these policies and practices will eventually be compromised. People will now have an additional reason to doubt that organizational changes are possible. Before it was human nature; now it is organizational realities.

Organizational Learning

All organizations have performance objectives. A key task of line administrators is to see to it that the objectives are achieved. Every time they are not achieved, there is a mismatch between intentions and results.

Organizational learning may be said to occur whenever there is a match between intentions and results or whenever a mismatch is detected and corrected. A key task of administrators, therefore, is to facilitate the learning capacities of the unit for which they are responsible.

There are two major categories of learning that occur

in organizations. The first is single-loop or thermostat learning; the second is double-loop learning. Single-loop learning occurs whenever a match is produced or whenever a mismatch is corrected without having to question or change organizational assumptions and policies. For example, a new procedure for welfare payments, or for correcting errors in the way a service is presently performed, are examples of single-loop learning.

Double-loop learning occurs whenever a match is produced or a mismatch is detected and corrected and changes are made in the basic assumptions and policies of the unit. A thermostat that detects and corrects the temperature in a room without questioning its program is single-loop learning. If the thermostat were to ask why it was set at 65 degrees, or why it should be measuring heat, that would be double-loop learning.

There are three features about single-loop learning that I should like to emphasize. Single-loop learning dominates everyday action. Indeed, it must because the purpose of organization itself is to decompose difficult and complex problems into simpler ones so that they can be performed in a routine matter. Therefore, single-loop problems probably represent the majority of problems that administrators face in their everyday lives.

Once a routine is established, individuals adhere to it because it is a proven way to get the job done. In a world full of pressures, it appears foolish to question a successful program and ludicrous to question the underlying assumptions that will, as one assistant secretary put it, "open up a Pandora's box."

The very success of single-loop actions can become the source for powerful credibility gaps. Once something that works no longer works, and if it can be shown that the organization was unable to confront that issue, then the capacity of the organization to detect and correct error is called into question. It appears that in both the Firestone and the Ford Pinto cases, the knowledge about the potential dangers was available, yet it could not be brought into play because some very powerful organizational assumptions and policies would have to be questioned. The Vietnam War is another example. Indeed, the Pentagon Papers represent an attempt at double-loop learning.

The third feature of single-loop issues is that the technology created to make sure they are dealt with may eventually contain the seeds for its own failure. For example, an information system used at the highest levels must necessarily be more abstract, impersonal, and distancing than the information systems used by lower level administrators at the first line action level. This can lead the local, first line individuals to believe that the top does not really understand the bottom and that it manages impersonally. Such beliefs, in turn, can lead the locals to hide and distort crucial information, especially when it is threatening (Argyris, 1977).

All administrators, therefore, face a dilemma. Organizations cannot be managed effectively without routinizing activities. Yet, the very managerial technology invented to make sure routines work may inhibit the

double-loop learning that is crucial to the long-run effectiveness and survival of the organization. This dilemma is built in and cannot be wished or designed away. Hence, organizations need administrators, especially at the upper levels, who know how to cope with dilemmas; who know how to create and facilitate double-loop learning.

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I am interested in implanting more double-loop processes in organizations so that they can make double-loop changes much more effectively and efficiently than is presently the case. In order to do so, the undiscussable games that people have learned to play for years will have to be dealt with. Moreover, we must deal with the organizational consequences of these games such as the win-lose group dynamics, the rivalries among coalition groups, and the double binds that many people report. An example of the latter are the whistle blowers. If they blow the whistle, they may lose their job or be ostracized by others. If they do not blow the whistle, they will feel a sense of dishonesty and disloyalty. Of course, only people who are concerned about honesty and loyalty get hurt. The others learned long ago to de-emphasize these factors in order not to get upset.

Examining Human Nature in More Detail

I must now turn to some fundamentals about our developing view of human beings as designing systems. Let us begin with the postulate that the environment is more complex than the human mind can deal with immediately (Simon, 1969). Let us add that, even if the mind were more efficient in information processing, it is rare that individuals have all the time they need to collect all the information relevant to a given situation or problem. Individuals will always be faced with information gaps. Let us also add that the most important resource that people have to fill in these gaps is other people (Argyris and Schön, 1974, 1978).

It follows from the first two requirements that human beings will always have less time than they need to design and implement their actions in any given situation. One way to solve this problem is for people to have a master or executive design in their heads about how to design their actions in a given situation. They go into a situation partially programmed. They are programmed in terms of the fundamental or underlying values and meanings that they will and will not express. The specific design for the given situation is not programmed.

For example, in the swine flu case that is discussed below, the administrators had designs about how to

influence and persuade their superiors even though the data to support their views was mixed. Apparently some of them oversold their case. Also, apparently some of the superiors inferred that they were dealing with over-enthusiastic subordinates. The superiors' program to deal with possible over-enthusiasm was not to deal with their inferences openly but to keep their eyes and ears open and to ask trusted and "objective" bystanders their candid views about what was happening.

The height of this game occurred in the meeting with the President. After he talked with a distinguished group of experts, he asked if anyone disagreed with the decision to produce the vaccine. There was silence. He asked again. Again, silence. He then said that he would go into his office and be available to meet with anyone who wished to speak with him privately. No one took up the invitation. Weeks later, the President's key aides were told that the reason some of the participants did not speak to the President was that they had concluded that he and his group had made up their minds and were holding the meeting to get support.

Here we have a President who, for some reason, doubted the efficacy of the decision-making process. He could not explore this issue. Hence, being programmed himself to deal with these issues covertly, he kept his doubts to himself and created a mechanism by which individuals could speak with him privately. Some of the participants apparently had doubts about the President's intention. They, too, were programmed to deal with such doubts by making them undiscussable. The result was that the President never learned all of the truth. Nor did the participants learn that the President was not asking them to pour holy water over a decision already made.

The third requirement is that the master program must lead to meanings that others can understand. This assumes that there cannot be an infinite variety of these master designs because individuals would not be able, or have the required time, to understand each other effectively.

Our research suggests that such master designs exist. Let us call them theories of action because they contain propositions about specified actions leading to specified consequences. For example, if you wish to get subordinates to do such and such, then behave in such and such a manner.

Theories of action exist at two different levels. One is what people say or espouse, hence their *espoused theory*. We soon found out that for double-loop issues, most people do not behave according to what they espouse. That should not be news to most readers. "Do as I say and not as I do" is a well-known maxim that illustrates this point.

But what may be more newsworthy is that there is a theory that is used to produce the actual behavior. This *theory-in-use* is the key to understanding, predicting, and changing human behavior, yet most individuals are unaware of it. If this is true, how do they use it? How do they manage their lives? Who is in control? To make the case more baffling, if people are unaware of the

discrepancy between their espoused theory and their actions, and if all actions are designed, then the unawareness must be designed. You must have, according to this view, a design to design your ignorance.

Individuals have a theory-in-use which they have learned through acculturation and which they use to produce skillful actions. One reason that they are unaware of their theory-in-use is precisely because their actions are skillful. Skillful actions mean that they achieve their objectives and with apparent effortlessness. All skillful actions are learned when people internalize rather complex programs. By "internalize" I mean that the person can perform the skill without paying attention to it. Indeed, paying attention to producing skillful actions could act to reduce the skillfulness of the action. I am told the computer program to ride a bicycle is over 400 pages long. Give the program to individuals who can ride a bicycle and require them to use it, and they will be immobilized. Asking individuals to become self-conscious about their golf or tennis games can reduce their effectiveness. People focus on their game when their effectiveness seems to go down, when they are producing errors.

In other words, we behave skillfully when the specific programs to produce the skills and the master designs to select the skills are tacit. Individuals' skills and actions are due to programs and theories-in-use to which they no longer have to pay attention. This means individuals rarely reflect on what they are doing while they are doing it because to do so may lead them to be ineffective (recall the example of the bicycle). It appears that it is the automaticity of the response coupled with the lack of on-line reflection that produces the unawareness so prevalent in errors of double-loop issues.

But if it is the automaticity of the response, and if the automaticity comes from a master design well-learned, then the unawareness is designed, it is programmed into human beings! This is why individuals are not only unaware of these types of errors but they are unaware that they are unaware.

An example comes to mind of Bill, president of a firm, who had concluded that his executive vice president (EVP) was not an appropriate candidate for president because he saluted the president too much and did not take initiative. After lengthy discussions with other presidents in an environment designed to teach double-loop learning, Bill realized that it was likely that he might be a major cause of the dependence and saluting on the part of the EVP (Argyris, 1976).

Before the discussion, Bill was sure that he had discovered that the EVP was a problem. After the discussion, he discovered a new problem *vis-à-vis* the EVP, namely himself. But there is a more profound problem that is so obvious that it usually goes unnoticed. Bill had not only discovered the wrong problem, but he was unaware that he had discovered the wrong problem. To put it another way, Bill probably felt confident that he could identify correctly problems such as the EVP. Not only did he learn that this was not the case, he also learned that he was unaware of this fact.

Bill may have been unaware of his errors, but the other presidents immediately saw them. We may be unaware of our impact on others but others are not. This makes sense if we keep in mind that the unawareness to which we refer is related to our theory-in-use. Others are not blind because they are in the posture of observing us, and, hence, are not in the mode of taking action. Of course, if our actions threaten or offend others, then they may not only see the incongruities, they may exaggerate them. The blindness appears to occur, therefore, primarily when we are designing and taking action. This may be one explanation for the fact that we see a memo or a letter differently if we hold it for a few days. During the second reading, we are less in the mode of being the actor and more in the mode of inquiring into our actions.

. . . if people are unaware of the discrepancy between their espoused theory and their actions, and if all actions are designed, then the unawareness must be designed. You must have, according to this view, a design to design your ignorance.

But then why is error not corrected when others provide appropriate feedback? Because embedded in every one of the master designs we have studied so far (from nearly 3,000 subjects in highly and moderately industrialized societies whose age, sex, color, and social culture ranged widely), there exists a proposition to the effect that "if someone behaves (in relation to double-loop issues) incongruently from what he espouses, then do not tell him because it may upset him and cause negative feelings." It follows that if you must tell him, wait and/or "ease in." Frequently people wait too long and then they blow up. Under these conditions, the recipient receives the feedback as biased or may even assume that the others are trying to hurt him. If, instead, they use the strategy of easing in, then the other may sense it, realize it is a game, act as if it is not a game, and seek equally covertly to figure out what they are trying to tell him. As is the case with all such face-saving games, they are undiscussable and their undiscussability is undiscussable.

It appears that most human beings hold the same theories-in-use in their heads. Their espoused theories vary widely and so do their behavioral strategies. But so far we have found that the theories-in-use do not vary. This finding troubled us initially because it could mean that our theory or the empirical procedures were wrong. We now believe that this was not the case (Argyris and Schön, 1974, 1978; Argyris, 1976, 1976a).

For example, in ten different groups, each of which contained from 75-100 individuals (female and male, young and old, and minorities), the participants produced a case of how they dealt with a poorly performing subordinate. They analyzed their cases and found that they all used the same theory-in-use which we have called Model I. Some key features of Model I were (1)

advocate your position in such a way that you unilaterally control others so that you increase your chances of winning and (2) whenever necessary withhold potentially upsetting information or hide it and slowly ease it in.

They role-played many different attempts to use this model and, by their own evaluations, the results were counterproductive. We then asked them to break up into small groups and design new ways to reduce the counterproductive features. The groups were reassembled and each group role-played its new version. In all cases, the behaviors changed but the underlying strategies of unilateral control, unilateral face-saving, win-don't lose, remained operative.

The findings are not as perplexing if we keep in mind two points. First, theories-in-use are master designs, they are not the situational designs. Thus, in effect we are saying that individuals will not vary in the underlying theories that they use. We are *not* saying that their actions will not vary. However, we are saying that people will not be able to produce any actions whose meanings would require a different theory-in-use. Second, theories-in-use are taught through socialization and acculturation. It makes sense for a society to limit the variance in norms, values, and meanings so that its members can be acculturated with moderate difficulties.

For our purpose, trying to enhance the effectiveness of the administration, it is safe to advise the reader that most individuals they will deal with use a master design or theory-in-use as did the individuals in the example above (i.e., Model I). We have also been able to show that individuals will necessarily create a particular set of organizational processes for double-loop learning. These processes eventually become embedded in the organization and take on an existence of their own. They become a system in that they are self-sustaining. We call this an O-I learning system.

Organizational Environments that Inhibit Double-Loop Learning

Donald Schön and I have tried to show that O-I learning systems protect and reinforce the Model I theories-in-use. Model O-I learning helps to assure that if an organization has a double-loop problem, the members are likely to solve it in such a way that they will either escalate the errors or translate the double-loop problem into a set of single-loop problems.

An example of the first is represented by the problem-solving processes in Vietnam whose documentation is well known to the readers of this journal. An example of the latter was surfaced at a seminar with Loeb Fellows at Harvard. A government agency attempted to deal with dishonest contractors by developing more and more detailed specifications. In effect, they took a double-loop issue (dishonest contractors) and translated it into a single-loop issue; they are dishonest, and we will make it harder to be so. There are two difficulties with this solution. First, the dishonest

contractors found new and creative ways to get around the specifications which, once discovered, brought further new specifications. The second difficulty was illustrated by some of the honest contractors who decided to reduce, if not stop, their dealings with the government because the specifications were not only unnecessary, they were an insult to their honesty.

Embedded in these O-I learning systems are the coalition rivalries, win-lose dynamics, crises, and political games, such as throwing the "dead cat" over into the other guy's yard during a budget session, "cover-your-ass" files and action, overpromising on plans and underproducing on performance, spending any leftover funds before the new fiscal year, and so forth. All these organizational games have the same feature described above. Everyone knows that they are played but they are not discussable when they are being played. These consequences combine to lead people to doubt that organizations are for double-loop learning, and hence, they lock organizations and individuals into O-I learning systems and Model I theories-in-use.

What Is Presently Being Done to Deal With Double-Loop Problems?

There are at least three strategies that senior administrators are using to deal with these problems. First is the development of personnel systems, such as Management by Objectives (MBO), to control the possible disagreement between a superior and his subordinates in the matter of what is expected of them and how well they are doing. The espoused theory of MBO is laudable. However, whenever data are available about what actually goes on during the session, both superiors and subordinates use Model I theories-in-use and conform to the norms of O-I learning systems. The result is that a good idea slowly withers away with the top management taking the lead in not executing it (Argyris, 1971). If our research is valid, then all these schemes will be significantly less effective than planned for because individuals simply do not have the concepts and the skills necessary to implement them. Moreover, I know of no governmental agency or private corporation which is offering adequate education to any level of personnel on these issues.

The second strategy is to alter the structure in two ways. At the lower levels, change the technology by enriching jobs and creating autonomous groups. This will work up to the point where double-loop issues are encountered. For example, whenever management sees these inventions as threats to their power, they may deal with their fears by restricting their applicability. The same is true for employees. There are already cases on record where employees have stopped their participation when it came to issues such as deciding salaries. Also, there are cases on record where employees who owned their company were offered handsome profits, and they reverted to narrow financial criteria that they had hitherto denounced (Argyris, 1978).

The second structural change is to create policies and reward systems that genuinely reward individuals for taking risks, building trust, and reducing the internal political games. These attempts will also be seriously limited because people do not have the theories-in-use necessary to produce the new actions required. For example, a group of corporation presidents who entered a learning environment structured so that they could learn a new theory-in-use were unable to produce actions consistent with the new theory-in-use even though they wanted to do so. Only after ten days of concentrated learning (spread over a year or more) did they begin to produce the new actions. Even then, when they tried to transplant the new actions to their respective home settings, they found it to be a difficult task (Argyris, 1976). If people who are the top of their organizations, who are financially secure, and who want to learn a new theory-in-use cannot do it without professional help, what is the likelihood that a change in structure or policy will work for those who have not had the re-educational experience? Our experience, to date, suggests that learning *can* occur if it is begun with the help of individuals who are competent in double-loop learning and if those in power want to reinforce such learning.

The third structural change is, as we have noted, the use of management information systems and policy analyses. These analytical procedures will work to the extent that they are fed valid information. But unless the Model I theories-in-use and the O-I learning systems are altered, it is unlikely that valid information will be forthcoming for the difficult and threatening decisions.

The insightful study by Neustadt and Fineberg (1978) on the swine flu program provides an illustration of the problem. Neustadt and Fineberg identified seven leading factors of ineffective decision making for the swine flu program. Six of them are relevant to this analysis (the seventh is related to the media).

The difficulty is that in real life, truth is a good idea when it is not threatening. If truth is threatening, the appropriate tactics and games will be deployed to reduce threat while covertly distorting the truth.

1. Overconfidence by specialists in not fully validated theories about influenza and influenza epidemics.
2. Advocating ideas based on personal agendas and acting as if this was not the case.
3. Subordinates manipulating superiors to perform as the former believed was correct.
4. Premature commitment to unnecessarily early decisions.
5. Addressing uncertainties in ways that made their reconsideration unlikely.
6. Insufficient questioning of implementation prospects (p. 142).

These causes are interdependent. Hence, overconfident subordinates or superiors advocating personal agen-

das made it more likely that issues would be discussed in ways that made their confrontation and reconsideration less likely.

The causal logic is, when these six factors exist, the errors made are predictable. At first reading, the logic makes sense and appears complete. If one has overconfidence in specialists and not fully validated theories, subordinates acting on personal agendas, subordinates manipulating superiors, then the errors made are likely.

The difficulty is that there was another key causal factor. These conditions were undiscussable and their undiscussability was undiscussable. The subordinates were not about to discuss candidly their personal agendas, their overconfidence, or their manipulation. More than likely, many of the subordinates may not have been aware of these features. If the superiors were aware of them, it is unlikely that they would discuss them either.

Note that in the recommendations made to correct these conditions, none were included to deal directly with these factors. It appears that the authors reacted automatically to this problem the way the 80 administrators did in the Davis College discussion. The behavioral issues were skirted.

Neustadt and Fineberg recommended essentially that the actors learn to use tougher reasoning processes. They wanted to institutionalize analytic toughness in the organization. In that spirit, they made specific recommendations about how people must be required to back up their generalizations with specific details, how groups should be required to explore the minority views, and so forth. For example:

- a. A tracing out of relationships between deadlines and each decision.
- b. An explicit statement of assumptions underlying each decision.
- c. An awareness that certain early memoranda, with their two-week go or no-go quality, actually obscured, rather than clarified, relationships between deadlines and individual decisions.
- d. The decision to begin manufacturing and the decision to institute a mass immunization program should have been kept separate.
- e. Explicit and detailed analyses of key action memoranda, either in probabilistic terms or in terms of what evidence would falsify the logic and actions planned.
- f. A forced systematic and detailed airing of views on each question, one by one (pp. 87-89).

There are two problems with these recommendations. First, the relationship between the causal factors identified by the authors and their recommendations is complex. For example, most of the recommendations require actors to tighten up on their thinking, to make it more confrontable, to explore perspectives that are counter to the trends they develop. But what is the probability that people will perform these requirements effectively if their theory-in-use leads them to seek to win and not lose, to control others unilaterally?

The fundamental thrust of the recommendations is to control error by making the logic in peoples' heads more public and hopefully more influenceable. This thrust will work, especially if it is backed up by sanctions from the superior. But what will also occur is that people will not forget their personal games, competitiveness, and so on. They will develop new ways to use them and to camouflage the fact that they are doing so.

To put it another way, the recommendations assume that, as we have already stated, truth is a good idea and modes of logic and control can be defined to enhance the production of such knowledge. The difficulty is that in real life, truth is a good idea when it is not threatening. If truth is threatening, the appropriate tactics and games will be deployed to reduce threat while covertly distorting the truth. Exercises in "tougher" decision-making processes will not erase these consequences. They may make non-truth more threatening. This will indeed be a step forward. The difficulty is that, although the individuals are coerced to surface threatening information, the reasons that prevented them from doing so in the first place are ignored. Two results are that pressure and tension may be increased and new protective actions may be designed that withstand the new toughness (usually by going further underground).

Traditional theories of administration err in the neglect of what hierarchies can do to people. . . . Experiential theories of administration ignored the paradox that one reason "inhumane" hierarchies are created is related to other humane features of individuals, namely their finite information processing capacity.

In another set of recommendations, Neustadt and Fineberg state that the actors should do much more thinking about doing (before and after a decision is made—pp. 91ff). The difficulty with this set of recommendations is that it does not take into account that people who are overconfident, selling personal agendas, and manipulating people may unrealizingly subvert the recommendations. Certainly certain actors should have thought further ahead and in more detail (p. 92). But the question arises as to how effective their thinking would be if they were also thinking about selling, manipulating, and winning.

In all these recommendations there is an implicit assumption that the causes for error identified by the authors are reducible by not discussing them and by laying on a template of rational decision making. This is an incomplete assumption because, as our research suggests, individuals are usually unaware of the extent to which they are producing such conditions for error. They are unaware, to repeat, because (1) the actions that produce the errors are skilled and tacit and (2), the causes for error are frequently undiscussable, and (3) they hold theories in their head about effective action

that make them blind to what they are doing and blind to the fact that they are blind.

The recommendations made by the authors, therefore, may unintentionally reinforce the conditions that created the problems in the first place. They also may provide subordinates with a rationality as to why they must go even further underground with some of their tactics. Going even further underground means that they run a bigger risk if they are caught. This, in turn, may lead to more frequent "dry runs," "just in case I am caught" memos to the file, and deeper layers of camouflage. These reactions would lead actors to feel even less optimistic that governmental systems are for double-loop learning. Hence, we will have established new, more hidden, self-sealing activities to inhibit double-loop learning.

The third strategy used to overcome these problems is to re-educate the executives. They are required to attend in-house as well as outside university programs. In these programs there are two learning technologies that many people believe will help deal with double-loop learning. One is the case method, the other is experiential learning such as sensitivity training. Although there is some evidence for believing that these two teaching modes are probably more effective than the traditional lecture and seminars, my own research leads me to predict that they will be limited.

Elsewhere I have tried to show that experiential learning in general, and T-groups in particular, developed limits for double-loop learning because they committed the same fundamental error as did those methods of learning based on Model I. T-group staffs tended to act as if the way to deal with the polarization against feelings was to polarize against rationality and cognition (Argyris, 1972a, 1979; Back, 1972). Also, if most traditional education focused on discovery of ideas, T-groups focused on discovery of feelings. Both intended that the insights lead to a better world, i.e., a world that manifested fewer counterproductive forces to learning. Yet, neither focused adequately on the skills necessary to produce the double-loop learning required if the world was to be rid of some of its counterproductive forces. Traditional theories of administration err in the neglect of what hierarchies can do to people (e.g., by placing them in dependent, submissive situations and, in many cases, performing non-challenging tasks). Experiential theories of administration ignored the paradox that one reason "inhumane" hierarchies are created is related to other humane features of individuals, namely, their finite information processing capacity (Simon, 1969).

The latter limitation has a profound impact on the probabilities that participation will be effective. If people have finite information processing limits, then there will be a limit to how much variance in information they can digest and act upon. But if our view is correct, Models I and O-I will combine to raise the probability for error (especially related to double-loop issues) by several magnitudes.

This is not to say that participation and power

equalization were not useful ideas. It is to say that their limits were not systematically explored. Again, this is similar to the blindness exhibited by those who generate Model I technology. For example, program planning and budgeting was a much needed technology but it had embedded in it limitations that were rarely acknowledged by its designers. To relate this to our theoretical perspective, we have found that Model I theories-in-use and those that are the opposite to Model I lead to different but equally counterproductive paths to double-loop learning (Argyris, 1972, 1980).

Let us now turn to the case method. Recently we observed and tape-recorded all the case sessions of a senior executive program (Argyris, 1980). The analysis of the tape recordings indicates that although faculty espoused a learning environment where students participated highly and student-teacher dependence was kept at minimal levels, the actual behavior observed was congruent with Models I and O-I. For example, students rarely participated as much as the faculty, but when they did, their behavior was consonant with Model I. They advocated their positions with a view to winning, they unilaterally evaluated others, and they unilaterally made attributions about others that were rarely tested in the classroom.

Faculty and students competed, as did the students with each other. Faculty kept their evaluations of students' competence covert and the students did the same with their evaluations of each other and the faculty. They made the latter evaluations public at the end of the program in the form of anonymous responses in questionnaires. Intergroup rivalries occurred and games of "covering your ass" with the faculty and/or students were observed. Neither the rivalries nor the games were ever discussed as part of the learning process. In short, they created an O-I learning environment.

The result was that the seminar environment became a replication of the conditions in the organizations from which the executives came, some of the very conditions that caused the low organizational double-loop learning that prompted the course to be held in the first place. Whenever executives identified ideas learned in the seminar as important, yet not introducible in the back home situations, these issues were rarely discussed. Moreover, we rarely observed the faculty assisting the executives to design ways to introduce the ideas that they were teaching in the back home environment. Hence, the case method led to conditions which reinforced the executives' views that organizations were not for double-loop learning (Argyris, 1980).

By the way, these findings neither surprised nor troubled the directors of several university and company executive programs. All of them identified the purposes of their program to be (1) to introduce the executives to new ideas to "unfreeze" them or "blow away their cobwebs," and (2) to provide the executives with an opportunity to meet and get to know other high-level executives in many different settings.

These objectives are not trivial. The question being asked is how we may go beyond these objectives to help

executives (1) become aware of the differences among their espoused theories, their actions, and their theories-in-use, (2) become aware of the kinds of learning systems they create in their organizations, (3) learn theories-in-use that facilitate double-loop learning, and (4) develop the skills to implement these new ideas.

Conclusions

The strength of the formal and informal public management theory used by many administrators is to manage single-loop problems. Such a strength is an important one. It is used to deal with the majority of everyday actions.

The present theories of management assume, like good football plays, that if they are followed correctly there will be a touchdown. This assumption implies another, namely, that there is no opposition. I am suggesting that the opposition is minimal or can be overcome for single-loop issues but not for double-loop issues.

The opposition to producing valid information for double-loop issues may come from fears and doubts created by organizations. However, we have found that individuals who are the top also deal ineffectively with double-loop issues. Hence, the opposition—at its core—is not so much opposition but inability to behave in other ways.

It is time, I suggest, that we teach administrators, especially at the upper levels, skills of double-loop learning. This should be done with the same dedication that was shown several decades ago when it was decided to teach analytic and quantitative skills to administrators so that the new information science technology could be used efficiently.

Although more research is needed on how to teach double-loop learning efficiently, some features are known. It requires an initial period away from the

everyday pressures of work (3-5 days). The first step is to help individuals become aware of their respective theories-in-use, the kind of problem-solving dynamics that they create for double-loop issues, and the degree of unawareness around these issues. The second step is to offer an alternative model for double-loop problem solving and to begin to develop the skills needed to implement it.

The third phase, which should be largely conducted within the organization, would be to help administrators practice their new skills in actual meetings and then reflect on their practice. This does not mean that they would have to reflect on their actions and their problem solving effectiveness in every meeting that they managed.

Nor does it mean that these skills and group dynamics are relevant for all meetings. Double-loop skills are relevant for double-loop problems. Single-loop skills are still relevant for single-loop problems. Nor does it mean that, in order to learn the new skills, experiential programs such as T-groups or sensitivity training will be required. The learning experiences that we are designing do have an important emotional component (for trust and risk-taking are not without feelings). But there is also a very strong cognitive component where the learning process focuses on the way individuals frame problems, the way they reason about them, and the designs that they use to implement their actions (Argyris, 1979).

Indeed, if our present research is not disproved, the kind of learning experiences that we are designing would also be relevant for teaching other models of decision making, policy analysis, and the use of quantitative information systems. Hence, we envision that organizations can develop an on-going learning environment that eventually is largely on-line, one where the substance of the class is the substance of everyday administrative tasks.

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